THE TERRIFIC WINDSTORM ON MOUNT WILSON, CAL., NOV. 24–26, 1918.

By WENDELL P. HOGE.

[Dated: Mount Wilson Solar Observatory, Cal., Dec. 18, 1918.]

A wind storm of unusual velocity and duration occurred at Mount Wilson, Cal., on November 24, 25, and 26, 1918. A rain storm beginning at 2:30 p. m. the 23d, accompanied by a moderate SSW. wind, ended with a heavy shower at 11:30 p. m., giving a total precipitation of 1.02 inches. Immediately after the rain ceased the wind veered to the NNW., increasing in velocity rapidly, registering 40 miles an hour at midnight. Thereafter it increased steadily, reaching a maximum of 90 miles per hour from 4:25 to 4:30 a. m., November 24. From 5 to 6 a. m. the same date 84 miles per hour was recorded, after which there was a slight diminution, but an unusually high velocity was maintained with great constancy for a period of 52 hours, or until nearly 4 a. m., November 26. From 3 a. m. to 8 a. m., the 24th, an average velocity of 75.4 miles was maintained. From midnight the 23d to midnight the 24th there was a wind run of 1,319 miles, being an average of 55 miles per hour. For the 52 hours duration of the high wind the average velocity was nearly 50 miles per hour. (See fig. 1.) The direction was almost constant from about NNW. The anemometer recording these velocities is on the top of the tower telescope building of the Mount Wilson Observatory, being 175 feet above ground, 150 feet above the highest part of the mountain, 75 feet above the tallest tree tops, and 5,900 feet above sea level.

All buildings of the observatory withstood the storm. The only damage was the destruction of six big yellow-pine trees and one Norway spruce, all located in a small area about a hundred yards northeast of the 100-inch telescope dome. The largest pine tree destroyed is 5 feet in diameter and estimated to be no less than 350 to 400 years old. Six of the trees were torn up by roots and one snapped off some 20 feet above the ground. There are many other large trees scattered about the mountain top exposed directly to the north winds but none were blown over except as noted above. This seems to be accounted for by the fact that the group blown down was situated at the head of a draw or ravine, while just north of the trees some 200 yards away there rises a small round hill or knob to a height of perhaps 80 feet. This seemed to split the wind, crowding it around into and up the ravine thereby increasing the velocity at that particular spot. All the fallen trees lay in the same direction, indicating a straight blow. (See figs. 2 and 3.)

That this was the highest wind occurring here for a very long time is indicated by the fact that nowhere on this mountain top is there evidence of big trees having been uprooted. As a rule, the winds on Mount Wilson are moderate, for an elevation of nearly 6,000 feet, and this storm was a very unusual phenomenon.

A NEW ALTITUDE RECORD.

[Reprinted from Scientific American, New York, Feb. 22, 1919, p. 165.]

Contrary to the belief recently expressed in this column, the altitude record of Capt. R. W. Schroeder recently made at Dayton, Ohio, did not endure for very long.* All altitude records were again broken on January 2 last, when Capt. Lang, R. A. F., and Lieut. Blowers, the former acting as pilot, ascended to 30,500 feet in 66 minutes and 15 seconds. A two-seater biplane fitted with a British-designed and British-built engine, was employed in making this new record. Due to the breaking of his oxygen-supply pipe, Lieut. Blowers collapsed in the course of the upward flight. The pilot in front had no knowledge of the serious condition of his companion, and kept climbing. Having reached 30,500 feet, the engine stopped through lack of fuel, and the pilot began a long volplane. When 10,000 feet altitude was reached, Lieut Blowers regained consciousness. Both airmen suffered severely from frostbite.

* Cf. M. W. R., 1918, 46:405.

URBAN VERSUS SUBURBAN TEMPERATURES.

By J. W. REDWAY.

[Dated: Meteorological Laboratory, Mount Vernon, N. Y., Jan. 24, 1918.]

A comparison of urban and suburban temperature means at St. Louis, Mo., and another at Pittsburgh, Pa., has been published in the MONTHLY WEATHER REVIEW for January, 1902, **30**, 12–13.

The following records were made at Battery Park, New York City, and Mount Vernon, N. Y., a suburb 17 miles northeast, as the crow flies. The laboratory at Mount Vernon is at the summit of the first divide beyond Long Island Sound. The thermometers are of the official Weather Bureau pattern; the laboratory itself is about 1.5 miles from the Sound, which is almost in sight. Battery Park and Mount Vernon, therefore, practically are coast stations. The following is a record of maxima, minima, and means for the year, 1918.

TABLE 1.—*Monthly maximum, minimum, and mean temperatures for the year 1918 at Battery Park, New York City, and Mount Vernon, N. Y.*

1918.	Maximum temperature.		Minimum temperature.		Mean temperature.	
	Battery Park.	Mount Vernon.	Battery Park.	Mount Vernon.	Battery Park.	Mount Vernon.
	°F.	°F.	°F.	°F.	°F.	°F.
January	28.8	28.5	14.5	13.8	21.6	21.2
February	38.2	38.1	21.1	19.3	29.6	28.7
March	50.7	52.8	31.8	30.1	41.2	41.4
April	58.0	60.6	41.7	39.7	49.8	50.2
May	72.8	73.6	55.0	53.3	63.9	63.5
June	74.0	75.1	58.8	57.3	66.4	66.2
July	80.3	81.6	65.1	63.4	72.7	72.5
August	82.4	83.4	67.3	65.1	74.8	74.2
September	70.2	71.3	55.5	54.0	62.8	62.6
October	66.1	69.1	51.0	48.0	58.6	55.6
November	51.8	55.2	39.6	36.6	45.7	45.9
December	45.5	46.3	32.5	30.0	39.0	38.2

The conclusions are apparent, and they do not differ from those reached by Prof. Herbert H. Kimball. Suburban days are somewhat warmer and surburban nights are somewhat cooler than urban days and nights.

The following facts have been established, but they can not be shown without a multiplicity of tabulated figures.

During overcast spells the differences between the daily maxima and also of the daily minima are least. This is not always the case, however. On such days the difference between maxima has been as great as 5° in favor, not of Mount Vernon, but of Battery Park.

During periods of high winds the minima at the two stations rarely differ. During very still nights the Mount Vernon minima average not far from 3 degrees lower than those of Battery Park.